# Operational FQT Report : 27-Mar-2014
# STENA PRIMORSK (9299147)

## Summary

Based on the Sulfur result and the commercial sample received, the fuel is potentially non-compliant. Please refer to the advice on the next page for more information.

Please take note of the precautions on the next page related to the fuel quality trend of the past four bunker samples

| | | | |
|---|---|---|---|
| **Sample Number** | ROT1411105 | **Customer** | NORTHERN MARINE MANAGEMENT |
| **Product Type** | (LSFO) | **Seal Data** | DNVPS, SEAL INTACT, 5230131 |
| **Bunker Port** | GOTHENBURG | | |
| **Bunker Date** | 22-Mar-2014 | **Related Samples** | |
| **Sampling Point** | SHIP MANIFOLD | **Supplier** | 5230132 |
| **Sampling Method** | CONTINUOUS DRIP | **Ship** | 5230133 |
| **Sent From** | GOTHENBURG | **MARPOL** | 134296 |
| **Date Sent** | 25-Mar-2014 | | |
| **Arrived at Lab** | 26-Mar-2014 | | |
| **Supplier** | STENA OIL | | |
| **Loaded From** | NORDEN | | |
| **Quantity per C.Eng.** | 200 | | |

## Receipt Data

| | | | | | |
|---|---|---|---|---|---|
| **Source Of Data** | B.D.N. | | **Sulfur** | 0.99 | % m/m |
| **Density @ 15°C** | 991.0 | kg/m³ | **Volume @ 15°C** | 202.301 | m³ |
| **Viscosity @ 50°C** | 380.0 | mm²/s | **Quantity** | 200.480 | MT |

## Fuel Quality

| Current | Trend | Parameter | **GOTHENBURG 22-Mar-2014** | HOU1406630 MARCUS HOOK 07-Mar-2014 | HOU1406042 FREEPORT (BS) 28-Feb-2014 | ROT1405701 OFF GABON 26-Jan-2014 | Unit |
|---|---|---|---|---|---|---|---|
| | | Density @ 15°C | **990.8** | 989.2 | 990.2 | 990.8 | kg/m³ |
| | | Viscosity @ 50°C | **394.4** | 250.7 | 304.3 | 381.2 | mm²/s |
| | | Water | **0.1** | 0.1 | 0.2 | 0.2 | % V/V |
| | | Micro Carbon Residue | **16** | 13 | 14 | 15 | % m/m |
| ▭ | | Sulfur | **1.02** | 1.08 | 2.88 | 2.28 | % m/m |
| | | Total Sediment Potential | **LT 0.01** | 0.02 | 0.04 | LT 0.01 | % m/m |
| | | Ash | **0.03** | 0.05 | 0.07 | 0.05 | % m/m |
| | | Vanadium | **36** | 25 | 175 | 170 | mg/kg |
| | | Sodium | **46** | 46 | 31 | 26 | mg/kg |
| | | Iron | **9** | 41 | 15 | 47 | mg/kg |
| | | Nickel | **22** | 41 | 43 | 44 | mg/kg |
| | | Calcium | **13** | 14 | 14 | 2 | mg/kg |
| | | Magnesium | **1** | 5 | 2 | LT 1 | mg/kg |
| | | Zinc | **LT 1** | 3 | 2 | 1 | mg/kg |
| | | Phosphorus | **LT 1** | 2 | 2 | LT 1 | mg/kg |
| | | Potassium | **LT 1** | 2 | 1 | LT 1 | mg/kg |
| | | Pour Point | **LT 24** | LT 24 | LT 24 | LT 24 | °C |
| | | Flash Point | **GT 70** | GT 70 | GT 70 | GT 70 | °C |
| | △ | Aluminium + Silicon | **9** | 48 | 45 | 11 | mg/kg |
| | | CCAI (Ignition Quality) | **851** | 855 | 853 | 852 | - |
| | Reported problems with fuel | | | No | No | No | |

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## Operational Advice :

| | |
|---|---|
| ▭ | Sulfur - Based on this commercial sample and the sulfur content specified on the BDN, the fuel oil is potentially non-compliant if used within a designated Emission Control Area (ECA, ref. MARPOL Annex VI Reg. 14(4)). It is recommended that the situation is recorded through a notification or Note of Protest (NoP) issued by the Master. Only the relevant official authorities can then advise on any further action necessary. Please note that the official MARPOL sample provided by the supplier is the governing sample regarding the compliance with this statutory requirement. For assistance issuing the Note of Protest, please refer to DNVPS' Instruction Manual. |
| △ | Noticeable amount of abrasive contaminants as indicated by Aluminum + Silicon can accumulate in the tanks onboard also for fuels within specification. It is recommended that tanks and filters are frequently drained to avoid carry over to the engine. We also recommend that samples are taken regularly before and after centrifuge to check centrifuge efficiency (Fuel System Check testing). |
| | Approximate fuel temperatures:<br><br>Injection:<br>145°C for 10 mm²/s<br>125°C for 15 mm²/s<br>115°C for 20 mm²/s<br>110°C for 25 mm²/s<br><br>Transfer :<br>45°C |

DNVPS Colour Code used :

✔ Satisfactory ▭ Caution ✖ Use of fuel not recommended △ Fuel Trend

Note:
LT means Less Than, GT means Greater Than.
Quantity (Weight) is based on BDN Volume, DNVPS Density and a weight factor of 1.1 kg/m³ (ASTM D1250-80 Table 56).

Best Regards,
On behalf of DNV Petroleum Services Pte Ltd
Arent Jansen
Technical Advisor

End of Report for STENA PRIMORSK



For technical or operational advice or further information on this report please contact your nearest DNVPS office or contact us directly at Tel : +31 10 2922600 Email : tvpnl155@dnvps.com